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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,467	05/04/2001	David Landa		8300

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08/20/2003

STEPHEN E. FELDMAN, P.C.
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EXAMINER

KEEHAN, CHRISTOPHER M

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,467

Applicant(s)

LANDA ET AL.

Examiner

Christopher M. Keehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

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DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

The declaration under 37 CFR 1.132 filed 7/15/02 is insufficient to overcome the rejection of claims 12-23 based upon the rejection as set forth in the last Office action because: the declaration, while stating that material used for sintered plates typically consists of alloys of iron or brass, and stating the respective melting temperatures thereof, the declaration does not show that Fukatani's sintered layers comprise these typical materials. Applicant has amended the claims to recite that the metal core has a melting temperature of not substantially greater than 1220°F, which is the melting point for aluminum, but applicant has not shown that the sintered layers of Fukatani are only able to bond at the temperature range as shown in the declaration.

Examiner's Comments

In previous telephone interview, applicant and the examiner discussed the pending rejections in the case, and discussed the melting temperature of aluminum. It appears there was some confusion concerning the relevance of Fukatani and melting temperatures. The examiner apologizes for any inconvenience this might have caused applicant. While the submitted declaration states sintered plates are typically made of alloys of iron or brass, and that bonding sintered plates made from brass or iron alloys

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requires temperatures up to at least 1380°F, it was thought by the examiner that applicant was going to submit a declaration concerning the melting point of Fukatani's sintered layers to show that Fukatani's sintered layers had to be bonded at a temperature higher than claimed by applicant. However, the declaration does not specifically address Fukatani or the sintered layers therein. Therefore, it is not possible to say that the sintered layers of Fukatani couldn't have been bonded as taught by the combination. As it appears the pending rejections have not been overcome, they have been maintained and are as set forth in the previous office action (summarized below). In addition, after another search based on applicant's amendments, new rejections have also been applied as set forth below.

Claim Rejections - 35 USC § 103

The rejection of claims 12-18, 20, 22, and 23 under 35 U.S.C. 103(a) as being unpatentable over Hayward (5,281,481) in view of Fukatani (4,537,299) has been maintained and is as set forth in the previous office action.

The rejection of claims 19 and 21 under 35 U.S.C. 103(a) as being unpatentable over Hayward (5,281,481) in view of Fukatani (4,537,299) and further in view of Watremez (5,629,101) has been maintained and is as set forth in the previous office action.

Specification

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The disclosure is objected to because of the following informalities: on page 4, lines 1-2, applicant discloses that the melting temperature of aluminum is 450°F. However, as applicant has pointed out, the melting temperature of aluminum is 1220°F. Appropriate correction is required. Further, there are numerous typographical errors and misspellings throughout the specification. Applicant is respectfully requested to correct these to make the disclosure more understandable.

New Claim Objections

Claims 12-23 are objected to because of the following informalities: in claims 12 and 20, the claim language "An adhesive boned" appears to be misspelled (adhesive bonded). Appropriate correction is required. Further, in claims 12 and 20, the claim language "a melting temperature not greater than substantially 1220" is a bit awkward. It is suggested to change this to read --a melting temperature not substantially greater than 1220-- for clarity.

New Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

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which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has disclosed using a core layer with a melting point of at least 450°F and a bonding temperature between the ranges of 375°F to 475°F. However, one of ordinary skill in the art is not enabled to make this invention when the bonding temperature is above 450°F, or more specifically from 451°F to 475°F. At these temperatures, the metal core layer would melt.

New Claim Rejections - 35 USC § 103

Claims 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward (5,281,481) in view of Jones et al. (5,957,251). Regarding claims 1, 19, and 21, Hayward discloses an adhesive bonded article comprising a thermosetting adhesive applied to each side of the core layer, and a friction element bonded to the core layer by the adhesive layers (Abstract, Figures 1 and 2A, and col.5, lines 14-42), and that various types of metal core layers and friction elements can be used (col.2, lines 25-35).

Hayward does not appear to specifically disclose sintered layers as a friction element. Jones et al. disclose sintered layers (col.7, lines 17-25) used as a friction element, bonded to a core layer of aluminum (Abstract and col.2, lines 48-50), and an adhesive that can be placed between the core layer and the sintered layers, respectively (col.9, lines 7-35). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a sintered friction element as taught by Jones et al. to the structure of Hayward because Jones et al. teach that using a sintered material as

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a friction element produces greater wear and specific heat properties, resulting in a longer lasting and higher quality product.

Regarding claims 13 and 14, Hayward discloses a thermosetting phenolic-epoxy adhesive (col.3, lines 11-20).

Regarding claims 15-18, Hayward discloses a bonding temperature, bonding pressure, and bonding time, respectively, that are included in the instantly claimed ranges (col.5, lines 13-20).

Regarding claim 20, the same reasoning as set forth above for claims 12 and 15-18 also applies to claim 20, as the claimed subject matter is essentially the same.

Regarding claims 22 and 23, the same reasoning as set forth above for claims 13 and 14 also applies to claims 22 and 23, as the claimed subject matter is essentially the same.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Meise et al. (4,395,442) disclose a sintered layer adhesively bonded to an aluminum alloy metal core layer (col.2, lines 15-29).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (703) 305-2778. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

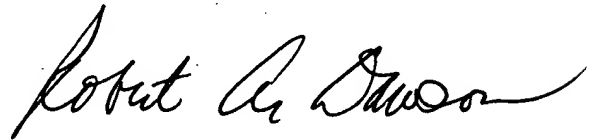
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Dawson can be reached on 308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Christopher Keehan *CK*

July 28, 2003



Robert Dawson
Supervisory Patent Examiner
Technology Center 1700